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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/614,107	07/12/2000	Dillis V. Allen	G-33	1565

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EXAMINER

VARMA, SNEH K

ART UNIT

PAPER NUMBER

3711

DATE MAILED: 07/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/614,107

Applicant(s)
Allen

Examiner
Sneh Varma

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 12, 2000
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) None is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) None is/are objected to.
- 8) ☒ Claims None are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Priority

1. This application repeats a substantial portion of prior Application No. 09/344,172, filed on June 24, 1999, now Patented 6,354,961, and adds and claims additional disclosure not presented in the prior application. Since this application names an inventor or inventors named in the prior application, it may constitute a continuation-in-part of the prior application. Should applicant desire to obtain the benefit of the filing date of the prior application, attention is directed to 35 U.S.C. 120 and 37 CFR 1.78. ✓

Drawings

2. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is required to furnish a drawing under 37 CFR 1.81. No new matter may be introduced in the required drawing. The Specification contains a brief description of drawings in Figures 30-32. However, these Figures are not included in the Application. A correction is required. ✓

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show in Figure 14, a recess 30, flange 32, face wall 12, and surface 33, as described in the specification Page 33, and flange 41, as described in the specification Page 34. Likewise, in Figures 15 and 16 features 42 and 45 described in the specification are not labeled. Any structural detail that is essential for ✓

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a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance. ✓

Specification

4. The disclosure is objected to because of the following informalities: as recited above, drawings described in the specification are missing and the labeling of the features in drawings are either missing or inaccurate. The disclosure is insufficient. It does not adequately disclose how to make and use a line of golf clubs. Appropriate correction is required. ✓

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: in Claim 20, the recitation of "a line of golf clubs production" lacks proper antecedent basis. The Applicant has not disclosed any production method. ✓

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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7. Claims 4-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Specification recites that Figure 32 describes 'a line of golf clubs', this Figure is not included in the Application. In Claims 4-12, the recitation of "A line of golf clubs" and in Claim 20, the recitation of "A line of golf clubs production" are indefinite. ✓

The Applicant is required to describe what constitutes "a line of golf clubs" in Claims 4-12 and what constitutes "production" in Claim 20. The Examiner presumes that the Applicant is varying certain parameters of a single golf club design to create a multiplicity of golf clubs that are structurally related, each differing from the others in the "line" in the selected parameters. ✓
The parameters that are being varied must be identified. Appropriate correction is required.

Likewise, in Claims 13 and 15, the recitation of "exceeding its elastic limit," in Claims 4-12, the recitation of "a line of golf clubs," and in Claims 14 and 18 the recitation of "80% of its elastic limit" are indefinite. A clarification of these limits is required. In addition, the Applicant has not sufficiently disclosed what constitutes a line of clubs and the means of production. A clarification of is required. ✓

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible

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harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969). ✓

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-20 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 6,354,961 (Patent '961) in view of Lu '814 (Lu) and Chou '081 (Chou). Although the conflicting claims are not identical, they are not patentably distinct from each other because it would be obvious to one skilled in the art that the Patent '961 discloses a golf club head having a ball striking face wall and a perimeter wall extending rearwardly from the face wall, and an abutment means fixed in the club head body spaced rearwardly from the ball striking face wall positioned sufficiently close to the face

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wall so the face wall impacts the abutment means at a given club head speed. These same properties are claimed in the instant application.

The Patent '961 also discloses, in Claim 4, a line of golf clubs with an abutment means as claimed by the Applicant. However, Patent '961 fails to disclose that the abutment is a planar wall fixed in the club head body extending behind and across a substantial portion of the ball striking face plate.

Lu teaches the use of a golf club head 10 (Figures 1-5; Column 4, lines 24-29; Column 5, lines 52-64; Column 6, lines 4- 67) comprising a face plate 14, an abutment 30 fixed in the club head body spaced rearwardly from the ball striking face wall and positioned sufficiently close to the face wall so the face wall impacts the abutment at a given club head speed, the abutment including a generally planar wall fixed in the club head body extending behind and across a substantial portion of the ball striking face wall, a perimeter wall 42 extending rearwardly from the face wall 14, and the club head body receiving the perimeter wall and the face wall as claimed by the Applicant.

Chou teaches a wood-type golf club head 10 (Figures 1-11; Column 3, lines 5-54, Column 2, lines 15-20) including an impact wall 16, the impact wall comprising: a thin and flexible ball striking face wall 16 in the front part; and an abutment means 14 properly spaced from a thin face wall (Column 3, lines 51-54; Column 5, lines 47-61).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the abutment wall as taught by Lu and Chou in the Patent '961 device to provide the means to increase the modulus of elasticity of the face wall at lower manufacturing cost.

It would also be obvious to an artisan skilled in the art of manufacturing the golf club heads that the modified Patent '961 golf club heads would incorporate a variation in thickness of the face wall, a varying distance between the abutment and the face wall, a varying modulus of elasticity of the face wall such that the face wall is the thinnest possible without exceeding about 80% of the elastic limit for the upper club head speed for which the club head is designed, and designation of the range of club head speed appropriate for a specific club head within the line of club heads, the same properties as claimed in the instant application.

10. Claims 1-3 and 13-19 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 09/955,899 in view of Lu and Chou. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although the conflicting claims are not identical, they are not patentably distinct from each other because it would be obvious to one skilled in the art that the copending Application No. 09/955,899 discloses a golf club head having a ball striking face wall and a perimeter wall extending rearwardly from the face wall, and an abutment, designed as a unit cell structure, fixed

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in the club head body spaced rearwardly from the ball striking face wall and positioned sufficiently close to the face wall so the face wall impacts the abutment at a given club head speed. The structure of the copending Application No. 09/955,899 is a means of providing the same function as that claimed by the Applicant. However, Application No. 09/955,899 fails to disclose a non-unit cell structure of the abutment wall.

As recited above, both Lu and Chou teach the use of an abutment wall with a non-unit cell structure. It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the arrangement taught by Lu and Chou in the copending Application No. 09/955,899 device to improve the performance of the golf club, to provide the means to increase the modulus of elasticity of the face wall at lower manufacturing cost, and to control the launch velocity of a golf ball.

It would also have been obvious to one having ordinary skill in the art at the time the invention was made to recognize that the device of Application'899 when modified by the teachings of Lu and Chou is a means to achieve the same function as that claimed for the invention. Since the Applicant has failed to provide any evidence of structural properties of the abutment wall which could contradict the recitation above, clearly the Applicant's claimed abutment wall is obvious and lacks criticality.

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Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-3 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Lu.

Lu discloses the use of a golf club head 10 (Figures 1-5; Column 4, lines 24-29; Column 5, lines 52-64; Column 6, lines 4- 67) comprising a ball striking face wall 14, a perimeter wall 42 extending rearwardly from the face wall 14, and the club head body receiving the perimeter wall and the face wall; an abutment wall 30 fixed in the club head body spaced rearwardly from the ball striking face wall and positioned sufficiently close to the face wall so the face wall impacts the abutment wall at a given club head speed as claimed by the Applicant. Lu also discloses that the face wall is thinner than 0.100 inches (Column 6, lines 4-17; Column 7, lines 30-67) and substantially parallel to the abutment wall (Figures 1-5).

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made

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to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 4-9, 10-12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Allen '791 (Allen), and either Chou or Kosmatka '547 (Kosmatka).

Lu discloses the invention as recited above. However, Lu fails to disclose a line of golf clubs. Allen teaches a line of golf clubs and means to increase the natural frequency and rigidity of the face wall to provide a high modulus of elasticity face wall for the high speed swing, and a lower modulus of elasticity face wall for a lower speed swing (Column 16, lines 38-59).

Kosmatka teaches the use of a golf club head (Figures 1-4; Column 4, lines 23-67; Column 5, lines 48-67) with the face wall having a thickness in the range of 0.010 inch to 0.250 inch and an abutment disposed rearwardly to the face wall (Column 6, lines 1-33). As recited above, Chou teaches the use of a wood-type golf club head 10 (Figures 1-11; Column 3, lines 5-54, Column 2, lines 15-20) including an impact wall 16, the impact wall comprising: a thin and flexible faceplate 16 in the front part; and an abutment wall 14 disposed rearwardly to the face wall, the faceplate and the abutment wall being spaced at a predetermined gap 18 (Column 5, lines 50-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the arrangement taught by Allen, Chou and Kosmatka in the Lu device to manufacture a line of golf club heads with thin, flexible face walls for improved energy transfer to a golf ball using an abutment means for limiting the deflection of the face wall during a high speed impact with the golf ball. An artisan skilled in the art of manufacturing the

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golf club heads would recognize that Lu's line of modified golf club heads would incorporate a variation in thickness of the face wall, a varying distance between the abutment and the face wall, a varying modulus of elasticity of the face wall such that the face wall is the thinnest possible without exceeding about 80% of the elastic limit for the upper club head speed for which the club head is designed, and designation of the range of club head speed appropriate for a specific club head within the line of club heads, the same properties as claimed in the instant application.

15. Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu in view of Chou and Kosmatka.

Lu discloses the invention as recited above. However, Lu fails to disclose the elastic limits of the face wall. Kosmatka teaches the use of a golf club head (Figures 1-4; Column 4, lines 23-67; Column 5, lines 48-67) with the face wall having a thickness in the range of 0.010 inch to 0.250 inch and an abutment disposed rearwardly to the face wall (Column 6, lines 1-33). As recited above, Chou teaches the use of a wood-type golf club head 10 (Figures 1-11; Column 3, lines 5-54, Column 2, lines 15-20) including an impact wall 16, the impact wall comprising: a thin and flexible faceplate 16 in front part; and an abutment wall 14 disposed rearwardly to the face wall, the faceplate and the abutment wall being spaced at a predetermined gap 18 (Column 5, lines 50-54).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the arrangement taught by Chou and Kosmatka in the Lu device to manufacture a golf club head with thin, flexible face wall for improved energy transfer to a golf ball using an abutment means for limiting the deflection of the face wall during a high speed impact with the golf ball. An artisan skilled in the art of manufacturing golf club heads would recognize that Lu's modified golf club heads would incorporate a variation in thickness of the face wall, a varying distance between the abutment and the face wall, a varying modulus of elasticity of the face wall such that the face wall is the thinnest possible without exceeding about 80% of the elastic limit for the upper club head speed for which the club head is designed, and designation of the range of club head speed appropriate for a specific club head within the line of club heads, the same properties as claimed in the instant application.

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Varma whose telephone number is (703) 308-8335. The examiner can normally be reached on Monday to Friday from 8:00 A.M. - 4:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Paul Sewell, can be reached on (703) 308- 2126.

The Official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9302 and the fax phone number After Final Office Action is (703) 872-

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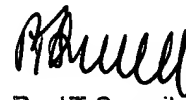
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9303. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

July 10, 2002

Sneh Varma, Patent Examiner

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Paul T. Sewell
Supervisory Patent Examiner
Group 3700